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**GUIDANCE FOR MEETING
OPERATOR CERTIFICATION REQUIREMENTS
PURSUANT TO THE
SAFE DRINKING WATER ACT
WATER SUPPLY MANAGEMENT INFORMATION PAPER
NO. IP-31-023**

USAEC

Prepared by:
U.S. Army Center for Health Promotion and Preventive Medicine
Water Supply Management Program

In Cooperation With:
U.S. Army Environmental Center
Environmental Compliance Division

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13. ABSTRACT (Maximum 200 words) This guidance document was developed in response to EPA's operator certification guidelines published on February 5, 1999. Section 1419 of the 1996 SWDA Amendments required EPA to publish guidelines in the Federal Register specifying minimum standards for certification (and recertification) of the operators of community and nontransient noncommunity public water systems. The USAEC and USACHPPM partnered to develop this guide to notify installation personnel of EPA's new baseline requirements for water system operators.			
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DEPARTMENT OF THE ARMY
U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
6158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO
ATTENTION OF

**GUIDANCE FOR MEETING OPERATOR CERTIFICATION
REQUIREMENTS PURSUANT TO THE SAFE DRINKING WATER ACT
WATER SUPPLY MANAGEMENT INFORMATION PAPER NO. IP-31-023
EXECUTIVE SUMMARY**

1. This information paper provides U. S. Army Directorate of Public Works (DPW) personnel and other pertinent environmental staff information on the new minimum water system operator certification requirements resulting from the 1996 Amendments to the Safe Drinking Water Act (SDWA). The Environmental Protection Agency developed minimum Federal requirements for State operator certification programs as a result of the 1996 Amendments to the SDWA. States will need to develop operator certification programs meeting these minimum requirements by 5 February 2001 or 20 percent of their funds from the State Revolving Loan Fund will be withheld. As a result, all approved State operator certification programs will require that government employees and contractors operating community and nontransient noncommunity water systems be certified. Individuals will need to meet minimum requirements in order to become certified.
2. Regulated Army water systems should prepare now to meet the minimum Federal operator certification program requirements by 5 February 2001. Environmental coordinators and DPW personnel will need to check with State drinking water administrators to determine if State certification programs will be more stringent than the Federal requirements discussed in this document. Executive agents and environmental program office personnel for overseas installations should use this document and investigate any available operator certification programs in preparation for future requirements in the Overseas Environmental Baseline Guidance Document.

This information paper has been prepared under a partnership project between the U.S. Army Center for Health Promotion and Preventive Medicine, Water Supply Management Program, and the U.S. Army Environmental Center, Environmental Compliance Division. The author wishes to thank staff members who contributed to the development of this document.

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TABLE OF CONTENTS

PARAGRAPH	PAGE
1. References	1
2. Purpose	1
3. Abbreviations and Terms	1
4. Use of This Document	1
5. Technical Assistance.....	1
6. Discussion	2
a. Importance of Safe Drinking Water	2
b. Operator Certification Programs	3
c. New Personnel Requirements for Water Systems.....	6
d. New Requirements for Operators Seeking Certification	6
e. Impact on Army Public Water Systems.....	8
7. Conclusions	10
8. Recommendations	11
 APPENDICES	
A. References	A1
B. Definitions and Abbreviations	B1
C. List of State Drinking Water Administrators and Operator Certification Program Officers	C1
 TABLE. Existing State Operator Certification Programs, March 1998	4
 FIGURE. Example EPR for Operator Training Funds.....	9



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GUIDANCE FOR MEETING OPERATOR CERTIFICATION REQUIREMENTS PURSUANT TO THE SAFE DRINKING WATER ACT WATER SUPPLY MANAGEMENT INFORMATION PAPER NO. IP-31-023

1. **REFERENCES.** Appendix A contains a list of references.
2. **PURPOSE.** The purpose of this information paper is to provide U. S. Army Directorate of Public Works (DPW) personnel and other pertinent environmental staff information on the new minimum operator certification requirements for *community and nontransient noncommunity water systems*.
3. **ABBREVIATIONS AND TERMS.** Appendix B contains a list of acronyms, abbreviations and definitions of terms used in this document. Terms in the document that are further defined in Appendix B are italicized.
4. **USE OF THIS DOCUMENT.** Environmental coordinators and DPW personnel should use this document to prepare their water systems and operators for minimum certification and qualification requirements. The document provides information as described in the Federal guidance for State drinking water program administrators entitled, "Final Guidelines for the Certification of Operators of Community and Nontransient Noncommunity Water Systems" (reference 1). Regulated water systems and operators of regulated water systems will need to meet all of the requirements described in this document at a minimum. State operator certification programs may impose more stringent requirements. Environmental coordinators and DPW personnel will need to consult their State operator certification programs, when completed, to determine any additional requirements for their regulated systems and operators.
5. **TECHNICAL ASSISTANCE.** Additional assistance in meeting Federal and State drinking water regulations may be obtained from the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), Water Supply Management Program (WSMP) at DSN 584-3919 or commercial (410) 436-3919 or from the U.S. Army Environmental Center (USAEC), Environmental Compliance Division at DSN 584-7068 or commercial (410) 436-7068.

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6. DISCUSSION.

a. IMPORTANCE OF SAFE DRINKING WATER.

(1) Importance of Safe Drinking Water. Both natural and man-made conditions threaten to pollute drinking water with potential contaminants. If not removed at some point prior to reaching the tap, consumers can experience short-term (acute) or long-term (chronic) health effects, depending upon the type and level of contaminant. Drinking water systems contain several barriers between the raw drinking water sources and the tap to protect consumers from such health effects. These are: *source water protection*, *treatment facilities*, proper operation and maintenance of the *treatment facilities and distribution systems*, effective monitoring programs, and competent, well-trained personnel involved in drinking water production.

(2) Impact of Operators on Safe Drinking Water. Drinking water system operators are directly involved in at least three of the five barriers of protection between potential drinking water contaminants and consumers that are listed above. Operators are responsible for the day to day operation of the *treatment facilities* that remove contaminants. They are also involved in operation and maintenance of the *distribution system*, and more often than not are responsible for monitoring the drinking water for both operational parameters and regulated contaminants. Competency of operators is critical for the maintenance of safe, optimal, and reliable operations of water *treatment facilities* and *distribution systems*, and ultimately for the protection of public health. State certification programs ensure that operators have the skills, knowledge, experience, education, and training required to operate drinking water systems.

(3) Regulations for Operators. The U.S. Environmental Protection Agency (EPA) has the responsibility for implementing Federal programs to ensure safe drinking water for the public. The Federal role in protecting consumers from drinking water contaminants ranges from development of minimum water quality standards to distribution of Federal funds to States for water system upgrade programs. The EPA has not, however, provided Federal quality criteria for drinking water system operators in the past. Such regulations were provided and enforced by State agencies responsible for protecting drinking water quality. The 1996 Amendments to the SDWA (reference 2) required the EPA to set a minimum Federal standard for State certification programs to ensure the following public health protection objectives:

(a) Customers of any *public water system* will be provided an adequate supply of safe, potable drinking water.

(b) Customers are confident that their drinking water is safe.

(c) *Public water system* operators are trained, certified and have knowledge and understanding of public health reasons for drinking water standards.

b. OPERATOR CERTIFICATION PROGRAMS.

(1) Existing State Certification Programs. All 50 States already have some form of an operator certification program. Idaho is the only State where certification is not yet mandatory. There is, however, a wide variation in program requirements and applicability. The following table contains a synopsis of existing State operator certification programs. Operators can expect some changes in existing certification requirements if their respective State's program does not currently meet recently finalized Federal guidelines. The table highlights those State's whose current program will require some change to meet the new minimum requirements.

(2) The 1996 SDWA Amendments, Section 1419. Prior to 1996, the SDWA did not address water system operator certification. The EPA had not developed a Federal certification program and operator requirements were determined at the State level. The 1996 SDWA Amendments, however, requires EPA for the first time to set minimum national standards for operator certification and recertification. Section 1419 of the 1996 SDWA Amendments (reference 2) states, "*(the EPA) shall publish guidelines... specifying minimum standards for certification (and recertification) of the operators of community and nontransient noncommunity public water systems.*" States with *primacy* are required to develop programs meeting these guidelines (or submit existing programs for approval) within 2 years of the effective date of the guidelines. The EPA is empowered by the Amendments to withhold 20 percent of a State's grant under the State Revolving Loan Fund (SRLF) unless the State has an approved program in effect by the deadline. The Federal mandate also provides for the first time, Federal funds for States to reimburse small systems (3,300 consumers or less) for expenses associated with operator certification. Both certification fees and training expenses can be reimbursed at the State's discretion (reference 2).

(3) Federal Baseline Standards for State Operator Certification Programs. On 5 February 1999, the EPA met the Federally imposed mandate by printing the "Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems" in the Federal Register notice (reference 1). The guidelines provide minimum requirements for States to include in their operator certification program. States will need to have in effect an approved operator certification program by 5 February 2001 in order to receive all of their entitled funds under the SRLF grant program. In order for a State's program to be approved it must contain all requirements listed in the guidelines, the State's attorney general must certify that the State has the authority to implement and enforce its operator certification program, and the program can be no less strict than any program which has been in place within the State since February 1998 ("anti-backsliding" provision). By ensuring that each State operator certification program contains the minimum requirements as laid out in the guidelines, the EPA can better protect health by ensuring that individuals operating water systems across the nation have the necessary education and training to provide safe drinking water.

Table. Existing State Operator Certification Program, March 1998.

ST	STATE	PROGRAM APPLICABILITY	BASIC PROGRAM REQUIREMENTS	EXPECT CHANGE
AL	Alabama	CWS & NTNC using SW	Must have certified operator in DRC.	Y
AK	Alaska	CWS using SW & CWS ≥ 100 SC &/or ≥ 500 P	Must have one operator certified at or higher than the level of plant classification(some exceptions.)	Y
AZ	Arizona	All CWS & NTNC systems	Must have certified operator in DRC.	Y
AR	Arkansas	All CWS & NTNC systems that sell water	All operators must be appropriately certified.	Y
CA	California	All PWS	Must have at least one certified operator. Any person doing hands-on treatment must be certified.	PN
CO	Colorado	PWS that treat water (no distribution systems)	Operator in DRC must be certified at or higher than level of plant classification.	Y
CT	Connecticut	All CWS	Must have two operators in DRC certified at or higher than level of plant classification.	Y
DE	Delaware	All PWS except seasonal supplies	Operator in DRC must be certified at or higher than level of plant classification.	Y
FL	Florida	All PWS	All personnel operating system must be certified.	PN
GA	Georgia	All PWS	All operators must be certified.	PN
HI	Hawaii	PWS using SW or GWUDI	Operator in DRC must be certified at or higher than level of plant classification.	Y
ID	Idaho	Voluntary	--	Y
IL	Illinois	All PWS	Must have at least one certified operator.	Y
IN	Indiana	All PWS	Must have certified operator in DRC.	Y
IA	Iowa	All CWS	Operator in DRC must be certified at level of plant classification.	Y
KS	Kansas	All PWS	Must have certified operator in DRC.	Y
KY	Kentucky	All PWS, except semi-public	Must have at least one operator certified at or above the level of plant classification.	Y
LA	Louisiana	All PWS	Must have at least one certified operator.	Y
ME	Maine	All PWS	Must have at least one operator certified at or above the level of plant classification.	Y
MD	Maryland	All CWS, NTNC Voluntary	All operators and superintendents must be certified.	Y
MA	Massachusetts	All PWS	Grade 3&4 systems must have certified operator each shift. Grade 1&2 can operate w/o, pending approval.	Y
MI	Michigan	All PWS	At least one certified operator per system.	Y
MN	Minnesota	All PWS	Must have at least one operator certified at or above the level of plant classification.	Y
MS	Mississippi	All PWS	Operator in DRC must be certified at level of plant classification.	Y
MO	Missouri	All CWS	Chief operator must be certified.	Y
MT	Montana	All PWS, except <25P	Operator in DRC must be certified at or higher than level of plant classification.	Y
NE	Nebraska	All PWS	Must have at least one certified operator.	Y
NV	Nevada	All PWS	Must have certified operator in DRC.	Y

CWS - Community Water System

NTNC - Non-transient Non-community water system

PWS - Public Water System

DRC - Direct Responsible Charge

SW - surface water source

GW - ground water source

GWUDI - ground water under the direct influence of surface water

Y - yes

SC - service connections (buildings, users)

P - persons served/consumers

PN - probably not

Table. Existing State Operator Certification Program, March 1998, cont.

ST	STATE	PROGRAM APPLICABILITY	BASIC PROGRAM REQUIREMENTS	EXPECT CHANGE
NH	New Hampshire	All CWS & NTNC	Must have at least one certified operator.	Y
NJ	New Jersey	All Class 1 & 2 facilities	Must have at least one certified operator.	Y
NM	New Mexico	All PWS	Must have certified operator on call.	Y
NY	New York	All PWS	Operator in DRC must be certified at or higher than level of plant classification and must have properly certified assistant operator.	Y
NC	North Carolina	All PWS	GW - certified operator available, SW - on-site during O & M activities important to water quality.	Y
ND	North Dakota	All PWS	Must have certified operator in DRC.	Y
OH	Ohio	All PWS	Systems serving >250 P must have certified operator in DRC or where a direct health hazard exists.	Y
OK	Oklahoma	All CWS & NTNC	Must have certified operator in DRC.	Y
OR	Oregon	All PWS, except GW <25P or <150SC	Must have certified operator in DRC.	Y
PA	Pennsylvania	All PWS	Must have two certified operators (one as backup).	Y
RI	Rhode Island	All CWS or SW/GWUDI PWS serving >500P	Must have certified operator in DRC.	Y
SC	South Carolina	All Group III, IV, & V PWS	Must have certified operator in DRC.	Y
SD	South Dakota	Any PWS with >500P, disinfection, or SW	Must have one certified operator.	Y
TN	Tennessee	All PWS	Operator in DRC must be certified at or higher than level of plant classification.	Y
TX	Texas	All PWS	Each shift must have at least one certified operator.	PN
UT	Utah	All CWS, except <800P	Manager must be certified at level of plant classification. Operator in DRC must be certified at or one level lower than plant classification.	Y
VT	Vermont	All PWS	Must have at least one certified operator per shift.	PN
VA	Virginia	All PWS	All operators in DRC and at least one designated alternate must be certified.	Y
WA	Washington	All PWS	At least one certified operator per facility. Facilities using SW or GWUDI must have two.	Y
WV	West Virginia	All PWS	Class II, III, & IV facilities must have certified operator present at all times.	Y
WI	Wisconsin	All municipal systems	Must have certified operator in DRC.	Y
WY	Wyoming	>two0SC	Must have certified operator in DRC.	Y

CWS - Community Water System

NTNC - Non-transient Non-community water system

PWS - Public Water System

DRC - Direct Responsible Charge

SW - surface water source

GW - ground water source

GWUDI - ground water under the direct influence of surface water

Y - yes

SC - service connections (buildings, users)

P - persons served/consumers

PN - probably not

c. NEW PERSONNEL REQUIREMENTS FOR WATER SYSTEMS. Approved State operator certification programs will classify the State's *community water systems* (CWS) and *nontransient noncommunity water systems* (NTNCWS) based on system characteristics, such as size, complexity, source, and number of consumers. Programs will impose minimum certification requirements for supervisory and other water system personnel of regulated systems. Owners of regulated systems will have to ensure that system personnel meet the following requirements:

- the operator in *direct responsible charge* (chief or highest supervisory operator) must have a valid (not expired) certification equal to or greater than the level of system classification [e.g., the chief operator at a Class III ground-water treatment system (where Class IV is the most complex water treatment system and Class I is the most simple water *distribution system*) would have to have a Class III or Class IV certification]

- any person making process control/system integrity decisions at a water system be a certified operator (Federal guidelines do not specify the level of certification required for these operators, but it is likely that State operator certification programs will require these operators at least be certified at the level of the system classification.)

- a certified operator must be either onsite or *available* for each *operating shift*.

d. NEW REQUIREMENTS FOR OPERATORS SEEKING CERTIFICATION.

(1) Minimum Education and Experience. Water system operators have a direct impact on human health through the drinking water that they produce in *public water systems*. In some cases, the population served by a *public water system* represents a large percentage of a State's population. Any individual with such a direct impact on human health must be competent. Federal guidelines now require that State operator certification programs impose minimum education standards for individuals seeking certification. Operators must have:

- a high school diploma or a general equivalency diploma (GED) and
- a minimum amount of on-the-job experience, as defined by the State program.

The amount of experience required will vary appropriately for each level of certification, with more experience required to become certified to operate more complex water treatment systems. State programs may allow individuals to substitute on-the-job experience for the high school diploma/GED requirement, but that experience cannot also count toward the on-the-job experience requirement. States may also allow individuals to substitute post high school education for on-the-job experience and credit can be given for experience in a related field (e.g., wastewater).

(2) Certification Exam. Approved State operator certification programs will require that operators pass a *validated exam* prior to receiving their certification. Exams will ensure that individuals have the skills, knowledge, ability, and judgement necessary to perform the duties of a water system operator at the level of certification they desire. Each level must have its own exam. Federal guidelines do not specify the required format of the exams, but do require that the exams be *validated* by a State appointed subject matter expert to ensure that the questions are appropriate for the given level of certification.

(3) Continuing Education. In addition to initial education and testing requirements, approved State operator certification programs will require that certified operators continue to learn and train about drinking water treatment and recent developments in the field. Operators will be required to renew their certification at least once every 3 years. In order to renew their certification, operators must receive a minimum level of training prior to certification renewal. Operators that fail to meet renewal requirements within 2 years of certification expiration will need to recertify. This may mean retaking the certification exam and paying initial certification fees again. Exact training requirements for renewal are left to the discretion of the State, but it is expected that requirements will vary with levels of certification. This will ensure that operators are receiving the training necessary to stay current on technological advances, regulations, and public health impacts of drinking water treatment. Any training or education used to meet the experience requirement described above cannot be used to meet the on-going education requirement for certification renewal.

(4) Grandparenting. The EPA stated in the Federal guidelines for operator certification, that they recognize "that there are many competent small system operators that may not meet the initial requirements to become certified " (reference 2). State programs that will result in certification requirements for previously unregulated operators will likely include some type of "*grandparenting*" program as recommended by the EPA in the Final Guidelines. Although large system operators were not specifically cited as being eligible for *grandparenting*, there are no Federal guidelines prohibiting such allowances. There are however, a number of other Federal stipulations for State *grandparenting* programs. Only existing operators will be eligible, and systems must apply for *grandparenting* for the operator in *responsible* charge within 2 years of the effective date of the State's operator certification program. Grandparented certifications are not transferable between operators within a system or between systems for an operator. If a grandparented operator chooses to work for a different water system, he or she must meet the initial certification requirements. Also, if the classification of the system changes, any grandparented certifications become invalid. As a condition to any State grandparented certification, the operator must meet within a given time period all requirements to obtain certification renewal.

e. IMPACT ON ARMY PUBLIC WATER SYSTEMS.

(1) Applicability. In accordance with Army requirements, Army facilities that operate a CWS or a NTNCWS will have to ensure that they comply with any State operator certification program changes resulting from the new Federal guidelines (reference 3 and 4). Many of these water systems may already be regulated by State operator certification programs. State programs may change, however, to meet the new Federal guidelines. Environmental coordinators should contact the State drinking water administrators or operator certification program officers (OCPOs) to determine what changes can be expected in the State's program as a result of these new Federal guidelines. Appendix C contains a list of State drinking water administrators and OCPOs (reference 5). At a minimum, environmental coordinators should prepare systems and operators to meet the requirements listed in this document.

(2) Preparing for Certification. State operator certification programs must meet minimum Federal guidelines by 5 February 2001. States may then allow operators and systems more time to comply with State certification programs. Once State programs are in effect, all government employees that operate regulated water systems will need to be properly certified. Contractors operating regulated government water systems will need to be properly certified, as well. This may mean changing written contracts in time to meet any compliance deadlines, and also may mean changes in contract costs. Contractors are likely to charge more for certified labor than non-certified. Once an environmental coordinator has determined what changes will take place in the State operator certification program, he or she should team up with appropriate personnel from the installations' utilities programs to assess which employees will need new certifications. These employees should be notified and should begin applying for any available grandfathering programs or begin preparing for certification at the appropriate level. Preparations for these changes should begin now with an estimated time of compliance of 5 February 2001. Environmental coordinators should be submitting Environmental Program Reports (EPRs) for training and related expenses now, where installation policies exist to fund training and professional certifications. The figure on the next page shows an example of a valid EPR for water system operator training expenses. Additionally, environmental coordinators for water systems serving 3,300 people or less should contact State drinking water administrators and/or OCPOs to determine availability of State funds for operator training expenses at small water systems [see paragraph 6b(2)].

(3) Certification Requirements Overseas. The 1992 Overseas Environmental Baseline Guidance Document (OEBGD) does not mention any type of operator certification requirements (reference 6). The draft revision of the OEBGD (which is expected to be finalized by July 1999) currently states that "Department of Defense (DOD) installations will ensure that personnel are appropriately trained to operate DOD water systems" (reference 7). Federal guidelines described in this document apply only to U.S. *public water systems* and operators. Future updates to the OEBGD, however, may likely include more stringent and specific operator certification and qualification requirements as it is updated to reflect current

Report Date: 6/7/99		EXHIBIT 2 REPORT		FTSILL0009	
Installation Name: FORT SILL		FFID: OK-213720846		Major Command: TRADOC	
Street Address: ATZR-EC		Property Number: 20846		Support Installation: GOGO	
City: FORT SILL		State: OKLAHOMA		Country: US Zip: 73503	
Congressional District:				Ownership Type: TRAINING SITE	
Abbreviation:				Installation Type:	
Local Information:				Subcommand:	
ASG:				Date of Last Revision: 6/7/99	
Agency Project Number: FTSILL0009		BSB:		Law/Reg Area: MULT	
Project Name: Water Treatment Plant Operator Training/Cert.		Multiple Installations:		Environmental Category: TRNG	
Date of Initial Entry: 6/7/99				Compliance Status: TRNG	
Reason for Initiation:				Project Assessment: H	
P2 Category:				Class: 0	
Pillar: Compliance		Must Fund (Y/N): Y		Design Plan Completion:	
Construction/Work Start:		Construction/Work Complete:		Final Compliance Required: 2/5/01	
Progress Code: OTH				Year Funding Required:	
Project Contact Name:				Contact Telephone:	
Geographic Initiative:				Total Cost Estimate: \$ 14,000	
Program Area:				Project Type: Other	
Other Project ID Type:				Other Project ID:	
Local Priority:				Command Priority:	
Fund Code:				Budget Code:	
Budget Code:				Required: \$2,000	
EY 2000		Obligated: \$0		Prd/Bdgt \$2,000	
2002		\$0		\$5,000	
				Obligated \$0	

Narrative:
Funding required for training and certification fees for all water treatment system operators as required by the Safe Drinking Water Act as amended in 1996. State regulations now require all employees at the facility to be certified and the chief operator must be certified at the level of the plant. Certification renewal (required every 3 years) requires at least 3 continuing education credits. FY 2000 & 2003 funding includes certification/renewal fees (\$300/operator). Other FY expenses include only training expenses.

Comments:

Figure. Example EPR for Operator Training Funds.

regulations pursuant to the SDWA. Since the Federal guidelines do not specifically define operator certification exam, renewal, and qualification requirements, DOD will need to rely upon existing host nation operator certification programs, any other appropriate certification entity or will need to develop its own standardized program. Some countries may already contain operator certification requirements as a part of their Final Governing Standards if host nation regulations have such programs. If not, executive agents and environmental program office personnel should use this document and investigate any available local operator certification programs in preparation for future requirements in the OEBGD.

7. CONCLUSIONS.

a. The EPA developed minimum Federal requirements for State operator certification programs as a result of the 1996 Amendments to the SDWA. States will need to develop operator certification programs meeting these minimum requirements by 5 February 2001 or 20 percent of their funds from the SRLF will be withheld.

b. Operators in *direct responsible charge* of CWS and NTNCWS must be certified at a level equal to or greater than the classification level of the water system. Any person making process control or system integrity decisions at a water system must be certified and a certified operator must be onsite or *available* during each *operating shift* at a water system.

c. All government employees that operate CWS and NTNCWS water systems will need to be properly certified. Contractors operating CWS and NTNCWS government water systems will need to be properly certified, as well. This may mean changing written contracts in time to meet any compliance deadlines and also may mean changes in contract costs.

d. In order to become certified, an individual must have a high school diploma or a GED, have minimum on-the-job experience, and pass a *validated exam*. Individuals must continue training and education in order to renew their certification.

e. States will likely grandparent existing CWS and NTNCWS water system operators requiring them to meet certification renewal requirements some time in the future.

f. Army CWS and NTNCWS should prepare now to meet the minimum Federal operator certification program requirements by 5 February 2001. Environmental coordinators and DPW personnel will need to check with State drinking water administrators to determine if State certification programs will be more stringent than the Federal requirements discussed in this document.

g. Overseas installations will likely be affected by DOD operator certification program requirements included in future updates of the OEBGD.

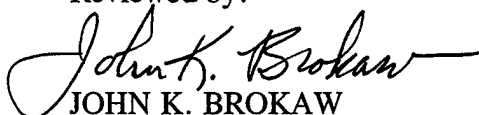
8. RECOMMENDATIONS.

- a. Contact the State drinking water administrators or OCPOs to determine what changes can be expected in the State's program as a result of these new Federal guidelines.
- b. Assess which employees will need new certifications. These employees should be notified and should begin applying for any available grandparenting programs or begin preparing to apply for certification at the appropriate level. Contracting offices will need to prepare any required changes in operating contracts.
- c. Prepare EPRs for known and estimated operator certification fees and training expenses, where installation policies exist to fund training and professional certifications.
- d. Executive agents and environmental program office personnel for overseas installations should use this document and investigate any available operator certification programs in preparation for future requirements in the OEBGD.



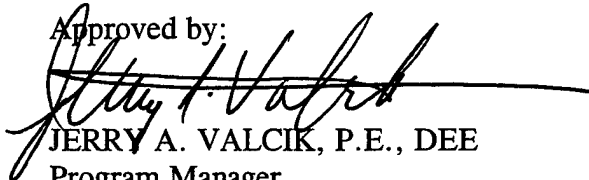
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**APPENDIX A
REFERENCES**

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2. Public Law 104-182, The Safe Drinking Water Act Amendments of 1996 , 104th Congress, 6 August 1996.
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4. AR 420-49, Utility Services, 28 May 1997.
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6. Department of Defense (DOD), Overseas Environmental Baseline Guidance Document (OEBGD), Prepared by the DOD Overseas Environmental Task Force, October 1992.
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APPENDIX B
DEFINITIONS AND ABBREVIATIONS

DEFINITIONS

Available - Based on system size, complexity, and source water quality, a certified operator must be onsite or able to be contacted as needed to initiate the appropriate action in a timely manner.

Community water system (CWS) - A public water system providing water to at least 15 service connections used by year-round residents or regularly serving at least 25 year-round residents.

Distribution system - Any combination of pipes, tanks, pumps, etc. which delivers water from the source(s) and/or treatment facility(ies) to the consumer.

Distribution system complexity - Examples include: pressure zones, booster stations, storage tanks, fire protection, chlorination, non-residential consumers, cross connection potential and/or demand variations.

Distribution system size - Examples include: population served, number of service connections, size of pipes total distance of pipe, and quantity of water distributed.

Grandparenting - The exemption for the existing operator(s) in responsible charge, as of the effective date of the State's regulation, from meeting the initial education and/or examination requirements for the class of certification the system has been assigned.

Non-transient non-community water system - A public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year. Common types of NTNCWS are those serving schools, day care centers, factories, restaurants, and hospitals.

Operating shift - The period of time during which operator decisions that affect public health are necessary for proper operation of the system.

Primacy - The condition under which a State regulatory agency, health authority, or other designated agent administers and enforces drinking water regulations developed to be at least as stringent as Federal regulations. As of the printing date of this document, of the 50 States and the 7 U.S. territories governed by the SDWA (the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of Northern Mariana Islands, and the Republic of Palau), all have primacy except Wyoming and the District of Columbia.

Public water system - A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any "special irrigation district."

Responsible charge - The operator(s) in responsible charge is defined as the person(s) designated by the owner to be the certified operator(s) who makes decisions regarding the daily operational activities of a public water system, water treatment facility and/or distribution system, that will directly impact the quality and/or quantity of the drinking water.

Source water protection - prevention of pollution of lakes, rivers, streams and ground water that serve as sources of drinking water. Development of a Source Water Protection Programs includes delineation of the area contributing to the source water, identification of potential sources of contamination to the source within that area, implementation of measures to manage these sources and future planning.

Treatment facility - Any place(s) where a CWS or NTNCWS alters the physical or chemical characteristics of the drinking water. Chlorination may be considered as a function of a distribution system.

Treatment facility complexity - Examples include: difficulty in controlling water quality, potential effect to the consumer and/or safety of the operator.

Treatment facility size - Examples include: population served, number of service connections, and/or plant flow.

Validated exam - An exam that is independently reviewed by subject matter experts to ensure that the exam is based on a job analysis and related to the classification of the system or facility.

ABBREVIATIONS

CWS - community water system

DOD - Department of Defense

DPW - Directorate of Public Works

EPA - U.S. Environmental Protection Agency

EPR - environmental program report

GED - general equivalency diploma

NTNCWS - nontransient noncommunity water system

OCONUS - outside Continental United States

OCPO - operator certification program officer

OEBGD - Overseas Environmental Baseline Guidance Document

SDWA - Safe Drinking Water Act

SRLF - State Revolving Loan Fund

USACHPPM - U.S. Army Center for Health Promotion and Preventive Medicine

USAEC - U.S. Army Environmental Center

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